

# **Idaho Observational Seat Belt Survey**

2006

## **Final Report**

Prepared by the Office of Traffic & Highway Safety

IDAHO TRANSPORTATION DEPARTMENT

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## Background

The methodology concerning the observational seat belt survey was changed in 1998 in accordance with The National Highway Traffic Safety Administration's (NHTSA) guidelines. An entirely new sample of observation sites was selected using a two-stage probabilistic sampling method. The method of analysis also changed to correct for the probabilistic sampling and determine the standard error correctly. Comparisons of 1998 and future surveys to historical data (1986 – 1997 surveys) should be made with caution as the new methodology differs greatly from the previous methodology.

It is physically impossible to observe every front seat occupant of every vehicle on every roadway for every day of the year. For this reason, a sample of sites was taken that covers the state geographically and captures the different types of traffic patterns, by adequately selecting the different types of roadways. The sample was selected randomly; however, counties with higher Annual Vehicle Miles of Travel (AVMT) and roadways with greater Average Daily Traffic (ADT) were more likely to be picked. While this helps to insure a cost-effective sample, it also introduces bias that must be accounted for and corrected in the analysis. Site-specific weights are calculated for a number of aspects and special software is used in the estimation process. The following table shows the 2006 estimated statewide usage, the standard error and the 95% confidence interval for the statewide estimate.

The estimated usage is the percentage of people observed wearing seat belts. The standard error is the average difference between the observed usage at each site and the estimated usage. The standard error is also an indication of how precise the sample is. The lower and upper 95% confidence limits define the 95% confidence interval. The 95% confidence interval is derived from the estimated usage and the standard error. The appropriate interpretation of the confidence interval is that if we were to do 100 surveys, we would expect 95 out of the resulting 100 confidence intervals to contain the "true" usage. The "true" usage is what we would get if we could observe every front seat occupant of every vehicle on every road for every day of the year. In other words, we are 95% confident the "true" statewide usage in 2006 lies between the 74.1% and 85.5%.

### 2006 Statewide Seat Belt Usage

Estimated Statewide Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
79.8%	2.9%	74.1%	85.5%

## 2006 Statewide Seat Belt Usage by Vehicle Type

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Passenger Cars	83.3%	2.5%	78.3%	88.2%
Vans & SUV's	84.2%	2.5%	79.2%	89.1%
Pick-Up Trucks	69.3%	3.9%	61.7%	77.0%

The estimated seat belt usage for pick-up truck occupants continues to be substantially lower than seat belt usage for either passenger cars or vans and sport utility vehicles (SUV's). The difference between seat belt use in pick-up trucks and in other vehicles is statistically significant.

## 2006 Seat Belt Usage by Transportation District

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
District 1	86.8%	2.0%	82.9%	90.6%
District 2	83.1%	1.4%	80.4%	85.9%
District 3	88.5%	2.9%	82.9%	94.2%
District 4	66.7%	1.9%	62.9%	70.5%
District 5	63.3%	2.7%	58.0%	68.5%
District 6	65.9%	1.1%	63.7%	68.1%

## 2006 Seat Belt Usage by County

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Ada</b>	93.0%	2.0%	89.1%	96.8%
<b>Bannock</b>	66.9%	1.5%	63.9%	70.0%
<b>Bingham</b>	53.9%	0.7%	52.5%	55.2%
<b>Blaine</b>	66.6%	1.0%	64.7%	68.5%
<b>Bonner</b>	82.5%	6.0%	70.8%	94.2%
<b>Bonneville</b>	66.3%	1.6%	63.2%	69.4%
<b>Canyon</b>	80.5%	1.4%	77.6%	83.3%
<b>Cassia</b>	58.9%	4.1%	50.9%	67.0%
<b>Elmore</b>	70.8%	5.4%	60.3%	81.2%
<b>Kootenai</b>	89.0%	0.8%	87.4%	90.6%
<b>Latah</b>	79.4%	0.7%	78.0%	80.7%
<b>Madison</b>	65.3%	1.5%	62.4%	68.2%
<b>Minidoka</b>	70.4%	2.4%	65.8%	75.1%
<b>Nez Perce</b>	85.1%	1.2%	82.7%	87.4%
<b>Payette</b>	86.9%	1.8%	83.4%	90.5%
<b>Twin Falls</b>	68.4%	2.6%	63.4%	73.4%

Not all counties in Idaho are included in the sample. For a more detailed explanation of how and why these counties were selected, please refer to Appendix A (page 11).

## 2006 Seat Belt Usage by Types of Road

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Urban</b>	81.2%	3.6%	74.2%	88.2%
<b>Rural</b>	76.0%	3.0%	70.1%	82.0%

Urban and rural designations are determined from the functional classification of the road.

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Major</b>	80.8%	5.6%	69.9%	91.7%
<b>Minor</b>	79.2%	3.2%	72.9%	85.4%

Major and minor designations are determined from the functional classification of the road. Major roads are Interstates and Principal Arterials, minor roads comprise all other functional classifications.

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Urban Major</b>	81.8%	6.5%	69.0%	94.6%
<b>Urban Minor</b>	80.8%	4.0%	73.0%	88.6%
<b>Rural Major</b>	77.4%	6.1%	65.4%	89.5%
<b>Rural Minor</b>	75.4%	3.7%	68.3%	82.6%

## 2006 Seat Belt Usage by Functional Classification

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b><u>Rural</u></b>				
<b>Interstate</b>	85.7%	3.8%	78.3%	93.0%
<b>Principal Arterial</b>	76.6%	6.4%	64.2%	89.1%
<b>Minor Arterial</b>	71.1%	4.3%	62.8%	79.5%
<b>Major Collector</b>	76.6%	4.5%	67.6%	85.5%
<b>Minor Collector</b>	32.4%	0.0%	32.4%	32.4%
<b>Local</b>	79.8%	4.1%	71.8%	87.8%
<b><u>Urban</u></b>				
<b>Interstate</b>	97.6%	1.0%	95.6%	99.6%
<b>Principal Arterial</b>	76.2%	4.7%	67.1%	85.4%
<b>Minor Arterial</b>	76.5%	3.5%	69.7%	83.3%
<b>Collector</b>	84.4%	5.4%	73.8%	95.0%
<b>Local</b>	87.2%	0.0%	87.2%	87.2%

## 2006 Seat Belt Usage by Day of the Week

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Sunday</b>	66.4%	11.1%	44.7%	88.0%
<b>Monday</b>	79.2%	3.4%	72.5%	85.8%
<b>Tuesday</b>	80.2%	5.9%	68.7%	91.7%
<b>Wednesday</b>	72.0%	2.6%	66.9%	77.1%
<b>Thursday</b>	86.5%	5.6%	75.4%	97.5%
<b>Friday</b>	78.9%	5.4%	68.3%	89.6%
<b>Saturday</b>	84.9%	1.6%	81.8%	88.1%

## 2006 Usage by Time of Day

	Estimated Usage	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
<b>Morning (7 - 11)</b>	83.3%	3.3%	76.9%	89.6%
<b>Afternoon (11 - 3)</b>	76.8%	3.2%	70.6%	83.1%
<b>Evening (3 - 7)</b>	70.6%	7.3%	56.2%	85.0%



## 2006 Usage – ITD District by Vehicle Type

ITD District	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
<b>1</b>	89.0%	89.3%	80.8%	86.8%
<b>2</b>	88.2%	86.6%	72.6%	83.1%
<b>3</b>	90.2%	92.1%	81.6%	88.5%
<b>4</b>	75.8%	74.2%	48.5%	66.7%
<b>5</b>	65.2%	69.4%	51.8%	63.3%
<b>6</b>	73.6%	71.2%	47.3%	65.9%
<b>Statewide</b>	<b>83.3%</b>	<b>84.2%</b>	<b>69.3%</b>	<b>79.8%</b>

## 2006 Usage - County by Vehicle Type

County	Passenger Cars	Vans and Sport Utility Vehicles	Pickup Trucks	All Vehicles
<b>Ada</b>	93.7%	95.1%	88.7%	93.0%
<b>Bannock</b>	67.3%	72.7%	59.1%	66.9%
<b>Bingham</b>	60.0%	59.7%	34.8%	53.9%
<b>Blaine</b>	73.1%	69.7%	57.4%	66.6%
<b>Bonner</b>	90.2%	82.6%	77.3%	82.5%
<b>Bonneville</b>	72.6%	72.8%	51.0%	66.3%
<b>Canyon</b>	83.4%	85.6%	72.1%	80.5%
<b>Cassia</b>	67.9%	74.2%	38.2%	58.9%
<b>Elmore</b>	72.6%	80.5%	59.2%	70.8%
<b>Kootenai</b>	88.6%	93.2%	84.4%	89.0%
<b>Latah</b>	85.7%	84.9%	65.3%	79.4%
<b>Madison</b>	75.0%	68.9%	40.6%	65.3%
<b>Minidoka</b>	81.2%	75.1%	46.2%	70.4%
<b>Nez Perce</b>	89.5%	87.7%	76.3%	85.1%
<b>Payette</b>	90.2%	89.9%	79.9%	86.9%
<b>Twin Falls</b>	74.6%	79.8%	53.5%	68.4%

## 2006 Usage by Observation Site

County	Location	Designated Road	Intersection	Usage
Bonner	1	Cedar (US 95)	at N. 2nd	76.4%
	2	Albeni Rd (US 2)	at SH 57	82.9%
	3	Dufort Rd	at US 95	82.8%
	4	US 95	at Larch	87.8%
	5	Cedar	at Boyer	78.7%
	6	US 2	at Division	86.7%
Kootenai	7	I-90 - Off Ramp	Exit # 7 (SH 41)	89.5%
	8	Mullan Rd	at SH 41	92.0%
	9	SH 41	at SH 53	85.5%
	10	SH 53	at US 95	86.3%
	11	15th Street	at Sherman Ave	79.6%
	12	I-90 - Off Ramp	Exit #14	82.1%
	13	US 95	At SH 53	85.5%
	14	Lincoln Way (US 95)	at Appleway	89.6%
Latah	93	SH 8	at Blaine	81.0%
	94	6th St	at Blaine	73.5%
	95	Jackson St	at 6th St	78.5%
	96	US 95	at Sweet Ave	84.0%
Nez Perce	97	US 12	at 3rd Ave N.	82.9%
	98	Main	at 13th St	88.2%
	99	16th Ave	at 17th St.	87.0%
	100	Powers Ave	at Thain Rd	83.0%
Ada	15	Overland	at Meridian Rd.	90.7%
	16	SH 55	at Floating Feather	96.7%
	17	Collister Dr	at Catalpa Dr	90.3%
	18	Mcmillan Rd	at Locust Grove	87.7%
	19	Franklin Rd	at Ten Mile	89.3%
	20	I-184 - Off Ramp	Curtis Road Exit	98.5%
	21	Chinden Blvd	at 36th St.	93.2%
	22	Cole Road	at Emerald	98.1%
	23	9th Street	at River St	90.6%
	24	Hayes St	at 13th St	95.1%
	25	N. Liberty	at Fairview	92.8%

## 2006 Usage by Observation Site - Continued

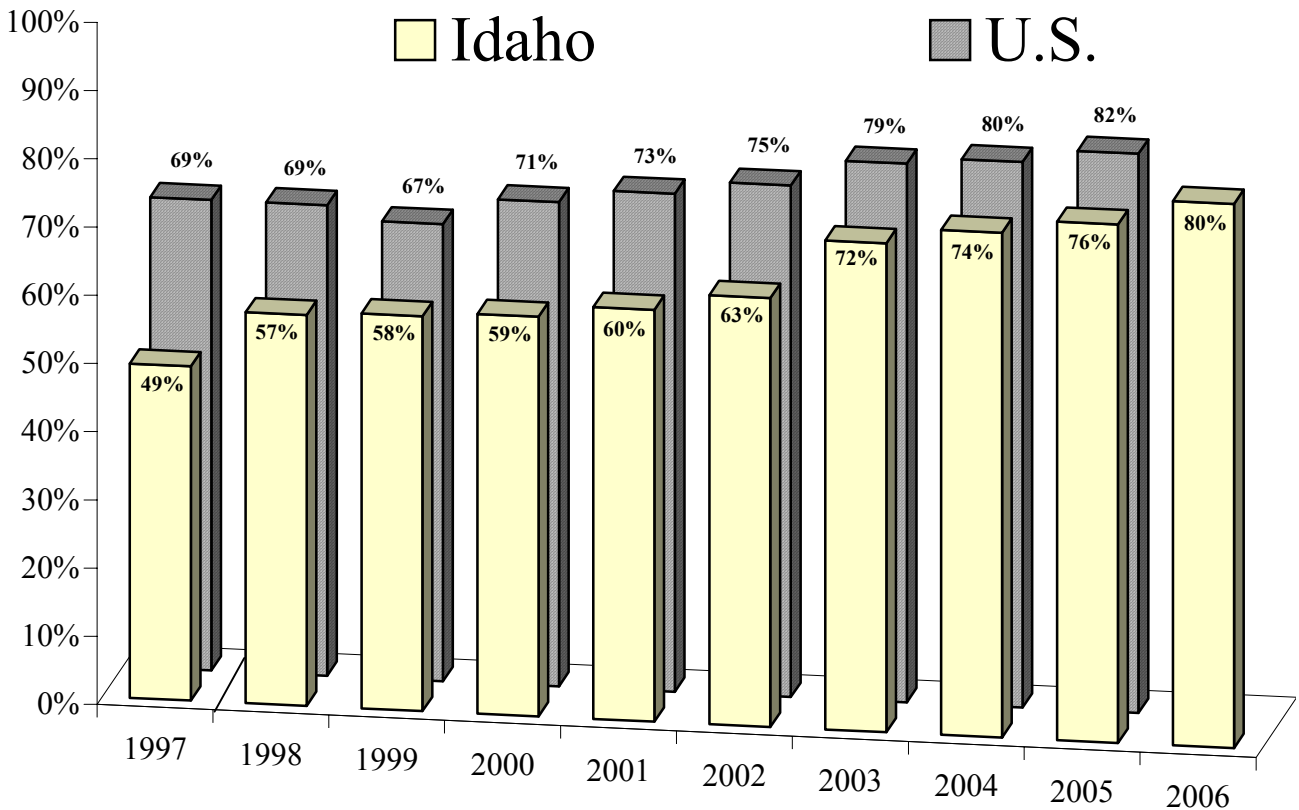
County	Location	Designated Road	Intersection	Usage
Canyon	26	Gekeler Rd	at W Boise Ave	92.2%
	27	Eagle Road	at Chinden Blvd	91.1%
	28	Jupiter (Entertainment)	at Overland	84.2%
	29	Adams Rd.	at E 44th St	90.0%
	30	SH 16	Jct w/ SH 44	88.6%
	31	Linden	at Indiana	69.0%
	32	US 20	at Middleton Rd	83.5%
	33	SH 55	at South 10th Ave	81.0%
	34	Centennial Way	at SH 19	75.5%
	35	I-84 - Off Ramp	Exit # 38-Garrity	92.5%
Elmore	36	Amity Rd	at South Side Blvd	86.5%
	37	Greenhurst	at 12th Ave	90.5%
	38	7th Ave	at 3rd St	82.0%
	39	I-84 Business Loop	at SH 51	62.0%
	40	I-84 - Off Ramp	Exit # 95	91.5%
	41	SH 51	at SH 67	72.3%
	42	American Legion	at 3rd East	76.7%
Payette	43	3rd E St	at 10th N St	65.2%
	44	McMurtrey	at Canyon Creek	60.7%
	45	US 95 (16th St)	at 8th St	92.0%
	46	8th Street	at Center St	84.5%
	47	US 95	at NW 16th St	89.0%
Blaine	48	SH 72	at US 30	82.6%
	67	Gannett Rd	at US 20	70.7%
	68	US 20	at Jct US 93/26	82.8%
	69	US 20	at SH 75	87.5%
Cassia	70	Saddle Rd	at Sun Valley Rd	57.8%
	71	Main St (SH 75)	at 1st St	63.6%
	72	Main St (SH 75)	at Bullion St	74.6%
	49	E. 5th St	at Overland	69.6%
	50	W Main	at Oakly	51.7%
	51	SH 77	at SH 81	57.6%
	52	I-84 - Off Ramp	Exit # 216	84.8%

## 2006 Usage by Observation Site – Continued

County	Location	Designated Road	Intersection	Usage
Minidoka	53	200 S.	at SH 27	32.4%
	54	Overland Ave	at 14th St	63.0%
	55	I-84 - Off Ramp	Exit #211 Rupert/Heyburn Exit	85.9%
	56	I-84 - Off Ramp	Exit # 201 Paul Exit	92.1%
	57	Overland Rd	at 5th St	76.3%
	58	O St	at 21st St	67.4%
Twin Falls	59	SH 24 (8th St)	at Meridian	74.0%
	60	SH 25	at SH 27	67.4%
	61	3700 N	at US 93	56.4%
	62	Blue Lakes Blvd	at Falls Ave	72.3%
	63	3rd St E	at 6th Ave N	65.9%
	64	Washington St	at South Park	76.6%
Bannock	65	Kimberly Rd (US 30)	at Eastland	64.2%
	66	Eastland Dr	at Orchard	65.3%
	73	Garrett Way (US 30)	at E Gould St	69.1%
	74	West Quinn Rd	at Poleline Rd	69.9%
	75	I-15 - Off Ramp	Exit # 47 (US 30)	80.7%
	76	S Main	at Benton Rd	60.0%
Bingham	77	Fir St	at US 91	51.4%
	78	US 91	at Fir St	57.3%
	79	W Judicial St	at Broadway	53.0%
Bonneville	80	I-15 - Off Ramp	Exit # 89	71.0%
	81	SH 43 (Ucon Exit US 20)	at SH 43/Yellowstone	62.2%
	82	Sunnyside Dr	at Woodruff Ave	64.5%
	83	Lincoln Rd	at Woodruff Ave	59.8%
	84	US 26	at 15th E (St Leon Rd)	62.0%
	85	Grandview Dr	at Skyline Dr	74.6%
Madison	86	US 20	Riverside - Exit #93	66.7%
	87	N Holmes Ave	at 5th St	70.2%
	88	I-15BL (Exit #113)	at Jct US 91	67.3%
	89	S 2nd E	at E 1st S	68.5%
	90	S 2nd W	at W 2nd S	59.2%
	91	US 20	at SH 33 (Rexburg Exit)	67.0%
	92	E Main St	at Center St	64.7%

## Seat Belt Usage Trends

### Idaho Seat Belt Usage vs. U.S. Seat Belt Usage



Slight changes in the observational seat belt survey existed from year to year prior to 1998. In 1998 the observational survey was completely revised to ensure national compliance and to produce a more accurate usage estimate. Comparisons of 1998 and future surveys to historical surveys (1986 – 1997) should be made conservatively as the new methodology differs greatly from the previous methodologies. The U.S. observed usage is calculated from the observed usage rates in each state. This figure is obtained from the National Center for Statistics and Analysis.

There was a change to the legislation regarding seat belt use (Idaho Code 49-673) that took effect July 1<sup>st</sup>, 2003. The observational survey was done after the law took effect in 2003.

From 2005 to 2006 the Idaho observed seat belt usage increased from 76.0% to 79.8%. This represents a 5.0% increase in seat belt usage from 2005 to 2006.

## Observed Usage - Transportation District by Year

	2002	2003	2004	2005	2006	Ave Yearly Change 2002-2006
<b>District 1</b>	70.6%	76.5%	76.2%	75.7%	86.8%	5.5%
<b>District 2</b>	68.4%	74.3%	75.4%	81.1%	83.1%	5.0%
<b>District 3</b>	63.3%	78.8%	82.4%	85.4%	88.5%	9.1%
<b>District 4</b>	53.6%	59.3%	59.6%	71.5%	66.7%	6.1%
<b>District 5</b>	55.4%	53.5%	57.1%	55.4%	63.3%	3.6%
<b>District 6</b>	57.8%	59.2%	66.3%	68.0%	65.9%	3.5%

## Observed Usage – County by Year

	2002	2003	2004	2005	2006	Ave Yearly Change 2002-2006
<b>Ada</b>	64.3%	81.0%	85.3%	89.9%	93.0%	10.0%
<b>Bannock</b>	58.5%	55.7%	61.2%	58.7%	66.9%	3.8%
<b>Bingham</b>	45.2%	47.4%	45.2%	48.7%	53.9%	4.7%
<b>Blaine</b>	60.0%	68.7%	68.6%	66.9%	66.6%	2.8%
<b>Bonner</b>	70.9%	74.4%	75.3%	73.0%	82.5%	4.0%
<b>Bonneville</b>	62.5%	59.4%	72.4%	70.7%	66.3%	2.1%
<b>Canyon</b>	63.2%	75.1%	77.9%	79.2%	80.5%	6.5%
<b>Cassia</b>	49.6%	53.9%	41.8%	66.9%	58.9%	8.6%
<b>Elmore</b>	52.9%	67.9%	70.2%	68.3%	70.8%	8.2%
<b>Kootenai</b>	70.2%	78.6%	76.8%	78.5%	89.0%	6.3%
<b>Latah</b>	74.0%	74.2%	71.9%	78.6%	79.4%	1.9%
<b>Madison</b>	52.4%	58.8%	58.0%	62.2%	65.3%	5.8%
<b>Minidoka</b>	48.5%	55.6%	54.2%	75.3%	70.4%	11.1%
<b>Nez Perce</b>	65.4%	74.4%	77.6%	82.5%	85.1%	6.9%
<b>Payette</b>	61.2%	71.9%	76.1%	75.4%	86.9%	9.4%
<b>Twin Falls</b>	58.9%	63.0%	73.2%	74.5%	68.4%	4.2%

## Observed Usage – Vehicle Type by Year

	2002	2003	2004	2005	2006	Ave Yearly Change 2002-2006
<b>Passenger Cars</b>	66.4%	77.0%	78.5%	79.9%	83.3%	8.0%
<b>SUV's/Vans</b>	70.0%	76.2%	79.1%	82.4%	84.2%	6.3%
<b>Pickup Trucks</b>	50.9%	58.4%	61.9%	62.9%	69.3%	10.9%
<b>Overall Usage</b>	<b>62.9%</b>	<b>71.7%</b>	<b>74.0%</b>	<b>76.0%</b>	<b>79.8%</b>	8.3%

# **Appendix A**

## **Idaho Observational Seat Belt Survey Methodology**





## Geographic Area

Counties were used as the primary sampling units. Of the 44 counties in Idaho, 24 were excluded by the demographic guideline in the Federal Register. This guideline states that at least 85% of the population must be eligible for inclusion in the sample. The 20 counties in the following table cover 85.8% of the 1997 statewide population. The sample size of the first stage selection was determined by the guidelines in the Federal Register. Since Idaho has 44 counties, 16 were selected from the 20 eligible counties for the sample. The Annual Average Vehicle Miles of Travel (AVMT) was used as the measure of size for each county. Each county was then assigned a weight directly proportional to its AVMT (selection weight = (county AVMT / total AVMT)\*100). The probability of selection for each county is equal to the selection weight divided by 100. The following is a list of the counties eligible for inclusion, the counties in bold are the counties that were selected.

District	County	1997 Population	1997 AVMT	Selection Weight
<b>1</b>	<b>Kootenai</b>	<b>98,767</b>	<b>1,671,072</b>	<b>11</b>
<b>1</b>	<b>Bonner</b>	<b>34,771</b>	<b>778,357</b>	<b>5</b>
<b>2</b>	<b>Nez Perce</b>	<b>36,819</b>	<b>423,701</b>	<b>3</b>
<b>2</b>	<b>Latah</b>	<b>32,532</b>	<b>410,497</b>	<b>3</b>
2	Idaho	15,082	381,344	3
<b>3</b>	<b>Ada</b>	<b>267,168</b>	<b>2,383,219</b>	<b>16</b>
<b>3</b>	<b>Canyon</b>	<b>116,675</b>	<b>1,402,957</b>	<b>9</b>
<b>3</b>	<b>Elmore</b>	<b>24,880</b>	<b>1,044,385</b>	<b>7</b>
<b>3</b>	<b>Payette</b>	<b>20,220</b>	<b>483,524</b>	<b>3</b>
3	Gem	14,454	105,920	1
<b>4</b>	<b>Twin Falls</b>	<b>61,298</b>	<b>550,769</b>	<b>4</b>
<b>4</b>	<b>Cassia</b>	<b>21,441</b>	<b>598,483</b>	<b>4</b>
<b>4</b>	<b>Minidoka</b>	<b>20,655</b>	<b>409,461</b>	<b>3</b>
4	Jerome	17,665	799,534	5
<b>4</b>	<b>Blaine</b>	<b>17,213</b>	<b>435,581</b>	<b>3</b>
<b>5</b>	<b>Bannock</b>	<b>73,850</b>	<b>1,058,016</b>	<b>7</b>
<b>5</b>	<b>Bingham</b>	<b>41,621</b>	<b>839,888</b>	<b>6</b>
<b>6</b>	<b>Bonneville</b>	<b>80,294</b>	<b>721,225</b>	<b>5</b>
<b>6</b>	<b>Madison</b>	<b>23,508</b>	<b>220,272</b>	<b>1</b>
6	Jefferson	18,942	345,048	2
Totals (All 20 Counties)		1,037,855	15,063,253	100

## Distribution of Observation Sites

The total number of observation sites was doubled from 50 (1986-1997 surveys) to 100. The average number of road segments in the sampled counties was 497. Counties with higher traffic volumes and/or more roadways need more observation sites in order to obtain an accurate sample. Therefore, each selected county was allocated a minimum of 4 observation sites and the remaining 36 sites were distributed randomly in pairs with a probability proportional to the county AVMT (=weight/100).

County	Population	AVMT	Weight (% Total VMT)	Total # of Sites
Kootenai	98,767	1,671,072	12	8
Bonner	34,771	778,357	6	6
Nez Perce	36,819	423,701	3	4
Latah	32,532	410,497	3	4
Ada	267,168	2,383,219	18	16
Canyon	116,675	1,402,957	10	8
Elmore	24,880	1,044,385	8	6
Payette	20,220	483,524	4	4
Twin Falls	61,298	550,769	4	6
Cassia	21,441	598,483	4	6
Minidoka	20,655	409,461	3	6
Blaine	17,213	435,581	3	6
Bannock	73,850	1,058,016	8	4
Bingham	41,621	839,888	6	4
Bonneville	80,294	721,225	5	8
Madison	23,508	220,272	2	4

## Stratification of Roadway Segments

Roadway segments were grouped into four strata: urban major, urban minor, rural major and rural minor. The Federal Highway Administration functional classification was used to assign the road segments to the strata. Major roads were defined to be Interstate highways and principal arterials. Minor roads were defined to be everything else, which includes minor arterials, major and minor collectors and local roads. Urban roads were defined to be roads within the urban limits of any city with a population of 5,000 or more. Rural roads were defined to be roads everywhere else.

To determine how the sites should be allocated to the strata, the 1997 average Daily Vehicle Miles of Travel (DVMT) estimates of each road type were examined. The two factors that determine the DVMT are the miles of roadway and the Average Daily Traffic (ADT). Breaking the DVMT up into its two components revealed some interesting differences. The following tables show the percentage break-up of the 1997 DVMT, 1997 Road Mileage and 1997 ADT between major/minor roads and urban/rural roads.

### Percentage of DVMT

	Major	Minor	Total
Urban	16.4%	17.4%	33.7%
Rural	29.1%	37.2%	66.3%
Total	45.5%	54.5%	100%

**Percentage of Road Mileage**

	Major	Minor	Total
Urban	0.5%	5.7%	6.2%
Rural	3.7%	90.1%	93.8%
Total	4.2%	95.8 %	100%

**Percentage of ADT**

	Major	Minor	Total
Urban	63.4%	13.7%	77.1%
Rural	18.5%	4.4%	22.9%
Total	81.9%	18.1%	100%

It is important to obtain a sample that is both representative of the state and cost effective. While sites were distributed to road type as the DVMT suggested insuring a representative sample, sites were distributed to area (urban/rural) closer to what the ADT suggested to insure cost effectiveness. The following table displays how the sites were distributed to the specific strata.

**Allocation of Sites to the Strata**

	Major	Minor	Total
Urban	29	34	63
Rural	16	21	37
Total	45	55	100

**Road Segment Selection**

The population of road segments from which the sample was taken is the Milepost And Coded Segment/Roadway Segment (MACS/ROSE) database. MACS/ROSE is our linear referencing system. Road segments were selected with a probability proportional to their Average Daily Traffic (ADT) in the same manner the counties were selected. Road segment selection was done within each specified county and strata. First the road segments were given a weight. The weight is equal to the rounded value of 100 times the road segment ADT divided by the total ADT within the county and strata. Road segments with unknown ADT and weights that rounded to zero were defined to have a weight of 1 and thus still had a probability of being selected. The probability of selection is equal to the weight divided by the sum of the weights for the county and strata.

## **Number of Observations per Site**

The number of observations per site was set to be 200 occupants or 2 hours, whichever came first. The amount of time used to complete the survey at each site is recorded and used as a weight in the estimation process.

## **Direction of Travel, Day of the Week and Time of Day**

Direction of travel was randomly assigned with equal probability. Depending on which direction of travel was assigned, the intersection with the best vantagepoint on the road segment was selected. This was done with an on-site visual inspection done by the Office of Highway Safety's Research Analyst Principal.

Observation sites were combined according to geographic proximity. Each group of sites was then randomly assigned a day of the week. This was done so that multiple sites could be done in one day. This maximizes efficiency and minimizes the cost of doing the survey. All days of the week, except Sunday, were eligible for selection. In 2000, sites were assigned to be done on Sunday at the direction of the National Highway Traffic Safety Administration, Region X.

## **Eligible Vehicles**

All drivers and front seat outboard passengers, where the shoulder harness can be seen, in non-commercial and non-emergency vehicles are observed. Observations can be made from multiple lanes, if the volume of traffic permits. A lane adjustment factor is applied in the estimation process. Vehicles where the shoulder harness cannot be seen, due to tinted glass or other obstructions, are not counted. Vehicles are categorized into one of three types. The three types are 1: passenger cars, 2: pick ups, and 3: vans and sport utility vehicles.

## **Observation Process and Training**

Since 2003, the survey has been done in June/July by the District Health Promotion Coordinators with the Idaho Department of Health and Welfare. In 2002, the survey was done in June by the Center for Health Policy at Boise State University. Previously the survey had been done in December by the Traffic Survey and Analysis Section of the Idaho Transportation Department. Prior to the observations being made, each observer attended training specifying the manner in which the counts should be made. The training included information on which types of vehicles to count, how to observe seat belt usage, and what elements were necessary for the estimation process and how to record those elements. A practice session followed the training, allowing the observers to be evaluated and ask any questions.

The observers were provided with a table of the observation sites specifying the intersection, direction of travel, and day of the week. A map of each location was also provided.

## Estimation Procedures

The statewide usage (the proportion wearing shoulder harnesses) will be computed by the following equation:

$$\text{Weighted Usage} = U_W = \Sigma (\text{AWT} * \# \text{ Observed Using}) / \Sigma (\text{AWT} * \# \text{ Observed})$$

Where the adjusted weight,  $\text{AWT} = [(1 / (\text{P}_{\text{PSU}} * \text{P}_{\text{SITE}})) * \text{LAF} * \text{TAF}]$  and where

$\text{P}_{\text{PSU}}$  = Probability of selection of the County

$\text{P}_{\text{SITE}}$  = Probability of selection of the road segment conditional on the county and strata it is in

$\text{LAF}$  = adjustment for the number of lanes = # of lanes on roadway / # of lanes observed

$\text{TAF}$  = Time Adjustment Factor = 120 Minutes / Amount of time to conduct the survey at a site (in minutes)

Calculation of the weighted usage and the standard error will be done with the PC CARP software. PC CARP is a software package designed specifically to handle survey data and control for the positive correlation between sample elements and the bias introduced by probabilistic sampling. PC CARP uses Taylor approximations to estimate the covariance matrices.

PC CARP defines the estimated totals and the covariance matrix as the following (Using the Ratio Estimator):

If we let  $\{Y_{ijk1}, X_{ijk1}, Y_{ijk2}, X_{ijk2}, \dots, Y_{ijkp}, X_{ijkp}\}$  denote the vector of variables to be analyzed. Where  $i$  is the stratum identification (Rural Major, Rural Minor, Urban Major Urban Minor),  $j$  is the cluster identification (primary sampling unit = county),  $k$  is the element-within-cluster identification (road segment).  $Y_{ijks}$  is the  $ijk$ -th observation for the  $s$ -th variable, where  $s=1, 2, \dots, p$ . The estimated totals are

$$\text{Rhat}_s = \text{Yhat}_s / \text{Xhat}_s \quad \text{where}$$

$$\text{Yhat}_s = \sum_{i=1 \text{ to } L} \cdot \sum_{j=1 \text{ to } n_i} \cdot \sum_{k=1 \text{ to } m_{ij}} W_{ijk} \cdot Y_{ijks} \quad s = 1, 2, \dots, p \text{ (# Using – weighted)}$$

$$\text{Xhat}_s = \sum_{i=1 \text{ to } L} \cdot \sum_{j=1 \text{ to } n_i} \cdot \sum_{k=1 \text{ to } m_{ij}} W_{ijk} \cdot X_{ijks} \quad s = 1, 2, \dots, p \text{ (# Observed – weighted)}$$

The covariance matrix of the vector of estimates  $\text{Rhat} = \{\text{Rhat}_1, \text{Rhat}_2, \dots, \text{Rhat}_p\}$  is estimated by:

$$\mathbf{Vhat}\{\mathbf{Rhat}\} = \sum_{i=1 \text{ to } L} (n_i - 1)^{-1} n_i (1 - f_i) \sum_{j=1 \text{ to } n_i} (\mathbf{d}_{ij} - \mathbf{dbar}_{i..})' (\mathbf{d}_{ij} - \mathbf{dbar}_{i..})$$

where

$$\mathbf{d}_{ij} = \{d_{ij.1}, d_{ij.2}, \dots, d_{ij.p}\}$$

$$d_{ij.s} = (\text{Xhat}^{-1}) \sum_{k=1 \text{ to } m_{ij}} W_{ijk} (Y_{ijks} - \text{Rhat}_s X_{ijks}), \quad s = 1, 2, \dots, p.$$

$$\mathbf{dbar}_{i..} = n_i^{-1} \sum_{j=1 \text{ to } n_i} \mathbf{d}_{ij}.$$

$$\mathbf{Xhats} = \sum_{i=1 \text{ to } l} \sum_{j=1 \text{ to } n_i} \sum_{k=1 \text{ to } m_{ij}} W_{ijk} X_{ijks}, \quad s = 1, 2, \dots, p.$$

$f_i$  is the sampling rate for the  $i$ -th stratum,  $n_i$  is the number of clusters in the  $i$ -th stratum,  $m_{ij}$  is the number of elements in the  $ij$ -th cluster, and  $W_{ijk}$  is the weight for the  $ijk$ -th observation. For the Idaho Observational Seat Belt Survey  $f_i = 0$ ,  $n_i = 16$  and  $m_{ij}$  varies, depending on the strata ( $i$ ) and county ( $j$ ).

# **Appendix B**

## **Survey Specifications**





# HOW TO CONDUCT A SAFETY BELT OBSERVATION SURVEY

## Selection and Preparation

1. Conduct seat belt observation surveys at each intersection listed on attachments. The National Highway Traffic Safety Administration recommends that selected intersections should be "controlled by signals or stop signs." Signal stops are the preferred choice. The sites should provide sufficient traffic flow--at least one car will stop for every change of the traffic signal.
2. Observations for the official statewide survey must be made on the designated road, at the specified day and time. Only observe traffic flowing in the direction that is specified. If observations cannot be made at the specified time due to heavy rain/snow, construction, a safety problem, etc., the observations will have to be made the following week at the designated time. If the observations cannot be made at the designated intersection, find the nearest intersection on the designated road and make the observations there. Please note the change on the observation form.
3. If you park on private property, such as a business, please to explain what you are doing to the person in charge and ask for permission to park on the property.
4. A survey can be conducted in one of two ways:
  - a. Standing on the street corner (never in the roadway); or
  - b. Seated in your vehicle.
5. If you choose to stand on the street corner, wear an orange safety vest.
6. People may be curious and ask what you are doing--please be prepared explain the importance of what you are doing.
7. As a helpful reminder, you may want to have something warm or cool to drink depending upon the number of observation sites, length of time and weather conditions.

## The Survey

1. Do not leave the site during the observation period.
2. There are three (3) categories of vehicles of which to report counts. **Observe All Vehicles.** (Do not be concerned about whether the vehicle is out-of-state) The categories are: 1) cars; 2) passenger vans and sport utility vehicles; and 3) pickup trucks.
3. Vehicles to be included are **two axle, four tires**, which include cars, pickups (not dually one-tons), sport utility vehicles, vans, mini-vans, or any other vehicle of this type where the shoulder harness is visible. Vehicles which should **not** be included are: all commercial vehicles (namely semis and large trucks), postal vehicles, law

enforcement vehicles and EMS vehicles

4. Do not count vehicles where you cannot see the shoulder restraint system – due to tinted glass, dirty windshields, etc....An effort should be made to determine non use by observing the shoulder belt not fastened.
5. Collect data for a maximum of 200 vehicles or 2 hours, whichever comes first. The amount of time spent at each site needs to be recorded for estimation purposes (i.e. how long did it take to count 200 vehicles).
6. Please record the number of lanes on the designated roadway. If the observation site is an off ramp, record the number of lanes on the primary roadway that the off ramp is exiting, not the number of lanes on the off-ramp (i.e. I-15, I-80, I-84, I-90, US 20)
7. Please record the number of lanes from which the observations were made. You may observe traffic from multiple lanes if traffic is not too heavy.
8. Count the **driver first**, then the front seat passenger.

### **Recording the Data**

1. Use one form per site.
2. Complete the upper portion of the form prior to conducting the survey. Please be sure to include starting and ending times, the number of lanes on the roadway and the number of lanes from which the observations were made.
3. Upon completion of the survey count, enter on line A, the number of persons observed using the shoulder restraints for each vehicle category. Enter the number of persons not using shoulder restraints on line B for each vehicle category. It is not necessary to compute the totals or percentage using safety restraints.
4. The Notes and Comments section is where you can enter any additional driver/passenger behavior information, such as children in or not in car seats, children in back seats or any other behavior that appear to show some level of positive/negative trend or unusual observations you have made. This section is optional.

**Thank you for your assistance in obtaining this needed information.  
Please submit copies of your surveys:**

Steve Rich  
Office of Highway Safety  
Idaho Transportation Department  
PO Box 7129  
Boise ID 83707-1129  
[Steve.Rich@itd.idaho.gov](mailto:Steve.Rich@itd.idaho.gov)  
(208) 334-8116

# **Appendix C**

## **Survey Forms**



<b>SEAT BELT OBSERVATION FORM</b>				
Observer:		Date:		
Location:				
City:				
# of Lanes on Roadway (1 direction):		# of Lanes Observed:		
Start Time: AM/PM		End Time: AM/PM		
Traffic Direction:				
Vehicle Type	CARS	PICK-UPS	SPORT UTILITY / VANS	TOTAL OBSERVED
A. Total persons observed using shoulder restraints				
B. Total persons observed not using shoulder restraints				
<b>CARS</b> Restrained		Not Restrained		
<b>PICK-UPS</b> Restrained		Not Restrained		
<b>SUV/VANS</b> Restrained		Not Restrained		
<b>Notes and Comments</b>				

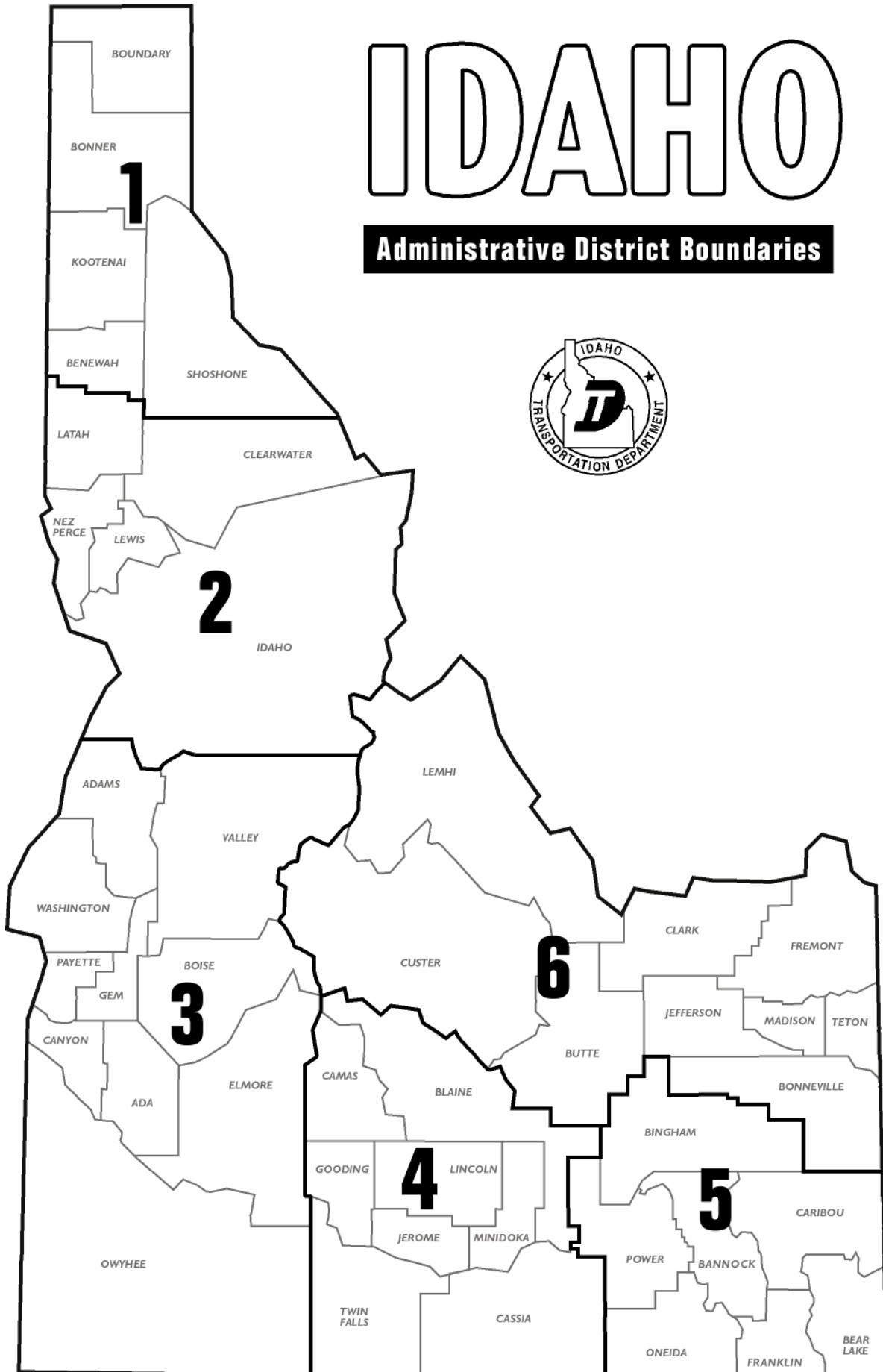


# **Appendix D**

## **Idaho Counties and Transportation Districts**









# **Appendix E**

## **Raw Data**



## Raw Data for Each Location

### District 1

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Bonner	1	Sandpoint	Urban Minor	W	70	88	38	57	47	58	155	203	1.0000	10.767	2.500	2	Thursday	1	48
	2	Priest River	Rural Major	W	79	94	56	72	45	51	180	217	1.0000	40.850	1.667	1	Thursday	1	72
	3	S of Sandpoint	Rural Minor	E	28	30	47	60	36	44	111	134	1.0000	1120.765	1.000	1	Thursday	2	120
	4	N. Sandpoint	Urban Major	S	85	93	37	46	58	66	180	205	1.0000	5.674	2.791	2	Friday	1	43
	5	Sandpoint	Urban Minor	E	78	92	34	54	58	70	170	216	1.0000	53.295	1.463	1	Friday	2	82
	6	Sandpoint	Urban Major	N.E.	75	84	42	54	59	65	176	203	1.0000	18.053	1.765	1	Friday	2	68
Kootenai	7	E of Post Falls	Urban Major	W	94	106	33	38	52	56	179	200	1.0000	11.468	2.667	2	Tuesday	1	45
	8	Post Falls	Urban Minor	W	94	103	35	40	56	58	185	201	1.0000	570.928	2.182	1	Tuesday	1	55
	9	Rathdrum	Rural Minor	N	84	98	34	46	53	56	171	200	1.0000	9.258	1.714	1	Tuesday	2	70
	10	N of C'DA	Rural Minor	E	38	44	25	30	6	6	69	80	1.0000	14.343	1.000	1	Tuesday	2	120
	11	C'DA	Urban Minor	S	78	97	35	46	47	58	160	201	1.0000	228.371	1.237	1	Wednesday	1	97
	12	C'DA	Rural Minor	E	78	96	35	46	52	59	165	201	1.0000	48.492	1.379	2	Wednesday	1	87
	13	N of C'DA	Rural Major	N	68	82	69	78	34	40	171	200	1.0000	16.350	2.308	1	Wednesday	2	52
	14	C'DA	Urban Major	S	97	109	40	47	44	46	181	202	1.0000	15.052	2.500	2	Wednesday	3	48

### District 2

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Latah	93	Moscow	Urban Minor	W	86	99	33	48	43	53	162	200	1.5725	18.441	3.158	1	Monday	1	38
	94	Moscow	Urban Minor	E	65	82	32	56	50	62	147	200	1.5725	33.254	1.132	1	Monday	2	106
	95	Moscow	Urban Major	S	71	85	40	63	46	52	157	200	1.5725	22.528	5.217	3	Monday	1	23
	96	Moscow	Urban Major	N	65	68	48	67	55	65	168	200	1.5725	12.672	4.000	1	Monday	1	30
Nez Perce	97	Lewiston	Urban Major	S	80	98	50	61	40	46	170	205	1.5235	4.749	6.667	2	Sunday	2	18
	98	Lewiston	Urban Major	W	100	112	40	47	40	45	180	204	1.5235	18.844	3.333	1	Sunday	2	36
	99	Lewiston	Urban Minor	E	86	92	39	53	49	55	174	200	1.5235	75.814	2.500	1	Monday	1	48
	100	SE Lewiston	Rural Minor	W	76	87	53	70	37	43	166	200	1.5235	91.975	2.609	1	Monday	1	46

## Raw Data for Each Location

### District 3

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Ada	15	S Meridian	Urban Minor	W	69	74	47	56	49	52	165	182	1.0000	117.033	1.000	1	Monday	1	120
	16	NE of Eagle	Rural Major	S	83	87	57	60	62	62	202	209	1.0000	16.803	6.000	2	Monday	2	20
	17	NW Boise	Urban Minor	N	83	95	40	47	63	64	186	206	1.0000	59.257	1.143	1	Monday	2	105
	18	N of Meridian	Rural Minor	E	65	71	39	54	74	78	178	203	1.0000	168.050	1.579	1	Friday	1	76
	19	SW of Meridian	Urban Minor	W	82	90	37	44	64	71	183	205	1.0000	91.790	1.143	1	Saturday	2	105
	20	Boise	Urban Major	E	104	106	40	40	55	56	199	202	1.0000	145.856	3.333	2	Thursday	1	36
	21	Garden City	Urban Major	NW	85	88	57	63	50	55	192	206	1.0000	36.464	2.222	3	Thursday	1	54
	22	Boise	Urban Major	N	107	110	34	35	62	62	203	207	1.0000	46.674	1.644	2	Thursday	1	73
	23	Boise	Urban Major	W	97	108	38	47	58	58	193	213	1.0000	55.564	2.182	3	Thursday	2	55
	24	Boise	Urban Minor	NW	83	89	40	42	70	72	193	203	1.0000	78.022	2.069	1	Friday	2	58
	25	Boise	Urban Minor	S	120	132	30	32	43	44	193	208	1.0000	195.055	1.667	1	Friday	3	72
	26	SE Boise	Urban Minor	N	95	102	25	29	70	75	190	206	1.0000	57.794	1.263	1	Thursday	2	95
	27	S of Eagle	Rural Major	N	52	57	53	63	80	83	185	203	1.0000	14.403	2.667	2	Saturday	2	45
	28	Boise	Urban Minor	N	75	88	38	49	57	65	170	202	1.0000	234.066	1.212	2	Saturday	1	99
	29	Garden City	Urban Minor	W	70	76	50	57	61	68	181	201	1.0000	275.371	1.143	1	Friday	2	105
	30	E of Star	Rural Minor	S	93	98	58	70	36	43	187	211	1.0000	33.610	1.875	1	Friday	1	64
Canyon	31	Caldwell	Urban Minor	E	68	109	23	33	47	58	138	200	1.0000	44.073	2.500	1	Wednesday	1	48
	32	E of Caldwell	Rural Major	E	71	83	47	61	49	56	167	200	1.0000	28.975	2.143	1	Wednesday	2	56
	33	S of Caldwell	Rural Major	E	86	103	43	57	33	40	162	200	1.0000	20.215	2.264	1	Wednesday	1	53
	34	Caldwell	Urban Major	S	76	89	46	73	29	38	151	200	1.0000	138.577	3.333	2	Wednesday	1	36
	35	E. Nampa	Urban Major	W	76	82	55	62	54	56	185	200	1.0000	16.789	2.400	2	Tuesday	1	50
	36	Nampa	Urban Minor	W	72	82	58	69	43	49	173	200	1.0000	82.637	1.500	1	Tuesday	1	80
	37	Nampa	Urban Minor	E	75	83	42	48	64	69	181	200	1.0000	46.393	2.857	2	Tuesday	2	42
	38	Nampa	Urban Minor	NE	71	87	39	54	54	59	164	200	1.0000	146.910	1.263	1	Tuesday	2	95
Elmore	39	Mtn. Home	Urban Minor	NW	81	89	52	58	51	53	184	200	1.0000	10.048	3.636	1	Friday	2	33
	40	Mtn. Home	Rural Major	E	59	64	50	58	75	79	184	201	1.0000	12.294	2.069	2	Saturday	1	58
	41	SW of Mtn Home	Rural Minor	N	44	53	49	85	53	64	146	202	1.0000	41.826	1.791	1	Thursday	2	67
	42	Mtn. Home	Urban Major	E	66	85	49	67	43	54	158	206	1.0000	21.250	2.857	3	Saturday	1	42
	43	Mtn. Home	Urban Minor	S	56	90	22	44	53	67	131	201	1.0000	21.100	1.290	1	Saturday	2	93
	44	Mtn. Home	Urban Minor	W	52	81	18	42	32	45	102	168	1.0000	143.864	1.000	1	Friday	3	120
Payette	45	Payette	Urban Major	S	81	89	52	58	51	53	184	200	1.3350	11.530	3.636	2	Monday	1	33
	46	Payette	Urban Minor	N	75	86	32	45	62	69	169	200	1.3350	39.415	1.143	1	Monday	1	105
	47	Fruitland	Rural Major	N	71	76	56	65	51	59	178	200	1.3350	15.600	3.333	2	Monday	2	36
	48	S of New Plymouth	Rural Minor	W	56	63	47	65	39	44	142	172	1.3350	55.894	1.000	1	Monday	2	120

## Raw Data for Each Location

### District 4

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Blaine	67	S of Gannett	Rural Minor	S	4	6	15	23	10	12	29	41	1.4820	124.795	1.000	1	Tuesday	1	120
	68	Carey	Rural Major	E	34	40	21	30	22	23	77	93	1.4820	6.500	1.000	1	Tuesday	2	120
	69	S of Bellvue	Rural Major	W	12	12	4	7	19	21	35	40	1.4820	6.882	1.000	1	Monday	1	120
	70	NE Ketchum	Rural Minor	E	38	48	25	54	59	109	122	211	1.4820	18.220	1.846	1	Monday	2	65
	71	Ketchum	Rural Minor	S	27	46	28	55	78	108	133	209	1.4820	6.507	3.333	2	Monday	2	36
	72	Hailey	Rural Minor	N	58	77	29	48	72	88	159	213	1.4820	6.073	3.750	3	Monday	2	32
Cassia	49	Burley	Urban Minor	E	79	95	21	59	42	50	142	204	1.0786	43.203	1.026	2	Thursday	2	117
	50	Burley	Urban Major	E	48	76	26	68	35	67	109	211	1.0786	12.511	3.000	2	Thursday	3	40
	51	Delco	Rural Minor	S	8	11	15	37	11	11	34	59	1.0786	123.571	1.000	1	Wednesday	1	120
	52	Burley	Rural Major	E	31	35	19	25	34	39	84	99	1.0786	6.147	1.000	2	Friday	1	120
	53	S. Burley	Rural Minor	E	5	15	2	14	5	8	12	37	1.0786	86.500	1.000	1	Tuesday	3	120
	54	Burley	Urban Major	N	64	105	20	40	47	63	131	208	1.0786	8.469	3.429	2	Tuesday	3	35
Minidoka	55	Self Explanatory	Rural Major	W	30	36	10	12	21	23	61	71	1.5765	1.692	1.000	2	Wednesday	1	120
	56	Self Explanatory	Rural Major	E	14	14	9	12	12	12	35	38	1.5765	1.353	1.000	2	Friday	1	120
	57	S of I-84 Exit #208	Urban Major	S	85	107	30	43	43	57	158	207	1.5765	7.862	4.800	3	Wednesday	2	25
	58	Heyburn	Urban Minor	N	42	51	5	20	13	18	60	89	1.5765	207.290	1.000	1	Wednesday	2	120
	59	Rupert	Urban Major	S	72	85	50	81	32	42	154	208	1.5765	16.510	1.481	2	Thursday	1	81
	60	Paul	Rural Minor	W	41	55	31	57	17	20	89	132	1.5765	35.549	1.000	3	Thursday	2	120
Twin Falls	61	SE of Filer	Rural Minor	W	9	10	12	26	1	3	22	39	1.1720	159.915	1.000	1	Wednesday	1	120
	62	Twin Falls	Urban Major	N	96	133	16	35	60	70	172	238	1.1720	8.423	4.800	4	Wednesday	1	25
	63	Twin Falls	Urban Minor	NE	13	18	5	12	9	11	27	41	1.1720	111.779	1.000	1	Wednesday	2	120
	64	Twin Falls	Urban Minor	S	84	109	40	61	36	39	160	209	1.1720	15.170	3.000	3	Wednesday	2	40
	65	S.E. Twin Falls	Urban Major	E	42	64	60	101	29	39	131	204	1.1720	11.486	2.182	4	Thursday	1	55
	66	S.E. Twin Falls	Urban Minor	S	11	16	11	17	10	16	32	49	1.1720	49.391	1.000	1	Thursday	1	120

## Raw Data for Each Location

### District 5

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Bannock	73	Pocatello	Urban Major	SE	70	107	38	55	44	58	152	220	1.0000	70.685	2.927	3	Monday	2	41
	74	Pocatello/Chubbuck	Urban Minor	W	89	127	24	36	45	63	158	226	1.0000	91.635	2.727	1	Thursday	2	44
	75	South of Pocatello	Rural Major	S	66	79	49	68	56	65	171	212	1.0000	15.298	1.000	2	Monday	1	120
	76	Pocatello	Urban Minor	NW	70	108	21	53	44	64	135	225	1.0000	64.777	4.000	2	Monday	2	30
Bingham	77	Shelley	Rural Minor	E	59	97	14	48	35	65	108	210	1.0000	51.603	1.379	1	Thursday	1	87
	78	Shelley	Rural Minor	SW	68	101	20	54	37	63	125	218	1.0000	23.383	2.449	1	Thursday	2	49
	79	Blackfoot	Urban Minor	SE	74	129	20	57	30	48	124	234	1.0000	73.404	2.609	2	Sunday	2	46
	80	SW of Blackfoot	Rural Major	NW	61	81	18	30	24	34	103	145	1.0000	6.447	1.000	1	Sunday	1	120

### District 6

County	Location	Area	Strata	Direction	Cars Using	Cars Observed	Pick-Ups Using	Pick-Ups Observed	Vans/SUV Using	Vans/SUV Observed	Total Using	Total Observed	County Weight	Road Weight	Time Weight	Lane Weight	Day of the Week	Time Period	Time Minutes
Bonneville	81	Ucon	Rural Minor	E	55	81	32	64	38	56	125	201	1.0000	81.616	1.412	1	Wednesday	1	85
	82	Ammon	Urban Major	W	73	111	23	44	46	65	142	220	1.0000	20.105	5.455	1	Wednesday	3	22
	83	Idaho Falls	Urban Major	E	74	119	26	54	31	46	131	219	1.0000	24.848	5.000	3	Wednesday	3	24
	84	Idaho Falls	Urban Major	SW	59	82	43	79	30	52	132	213	1.0000	23.279	4.444	2	Wednesday	3	27
	85	Idaho Falls	Urban Minor	E	70	89	40	57	43	59	153	205	1.0000	39.262	2.105	1	Friday	1	57
	86	Idaho Falls	Urban Major	NE	70	92	26	60	38	49	134	201	1.0000	20.105	2.449	2	Friday	1	49
	87	Idaho Falls	Urban Minor	S	66	90	28	52	50	63	144	205	1.0000	52.350	5.714	2	Friday	2	21
	88	S of Idaho Falls	Rural Major	E	68	88	33	68	43	58	144	214	1.0000	153.045	3.636	1	Friday	2	33
Madison	89	Rexburg	Urban Minor	N	84	109	17	39	36	52	137	200	2.9305	40.216	3.529	1	Tuesday	1	34
	90	Rexburg	Urban Major	S	81	111	10	41	31	54	122	206	2.9305	14.600	5.000	2	Tuesday	3	24
	91	W of Rexburg	Urban Major	S	48	69	37	78	49	53	134	200	2.9305	21.900	1.176	2	Tuesday	1	102
	92	Rexburg	Rural Minor	W	70	93	19	46	43	65	132	204	2.9305	28.066	4.444	2	Tuesday	1	27